

# WRC-95 Spectrum Should be Incorporated Into the 2nd Round

- All parties agree that the pending applicants should have access to frequency allocated at WRC-95 and WRC-97
- Incorporation of the WRC-95 spectrum into the channel plans of the licensees sharing the 148-149.9 MHz band will enhance multiple system sharing
  - maximizes the use of the 148.81-149.9 band for those services requiring worldwide operation or access from aeronautical or mobile locations
  - providers have incentive to optimize the use of spectrum pool by using WRC-95 spectrum for those markets that can be served within the regional and service category limitations
  - Orbcomm can incorporate the expanded channel plan into its second generation equipment

# Frequency Pairing for Proposed System A & B

**Frequency Pairing for Proposed System A and System B**

	<b>System A</b>	<b>System B</b>	<b>Sharing</b>
<b>Uplink</b>	148.905 - 149.810 MHz 149.810 - 149.855 MHz 150.000 - 150.050 MHz 399.900 - 400.050 MHz 455-456, 459-460 MHz	148.905 - 149.810 MHz 149.855 - 149.900 MHz 149.950 - 150.000 MHz 399.900 - 400.050 MHz 455-456, 459-460 MHz	with Orbcomm and terrestrial time-shared with VITA LMSS and shared with RNSS with Orbcomm, A, B & RNSS with Orbcomm, System A & B
<b>Downlink</b>	400.150 - 400.505 MHz 400.505 - 400.5517 MHz 400.645 - 401.000 MHz		time shared with DMSP time shared with VITA time shared with DMSP
<b>Downlink</b>		137.025 - 137.175 MHz 137.333 - 137.367 MHz 137.753 - 137.787 MHz 137.825 - 138.000 MHz	time shared with NOAA time shared with NOAA time shared with NOAA time shared with NOAA

# Alternative Band Plan Optimizes Available Spectrum - Supports Fully Competitive Systems

	Downlink as % of Orbcomm	Uplink as % of Orbcomm	Balanced as % of Orbcomm
System A	90.0%	98.0%	90.0%
System B	92.0%	98.0%	92.0%
NPRM System-1	5.7%	91.0%	5.7%
NPRM System-2	92.0%	84.0%	84.0%
NPRM System-3	85.0%	16.0%	16.0%

# Leo One USA's Proposal for New Little LEO Systems A and B Best Serves the Public Interest

- Systems A & B
  - capable of supporting a near-real-time system
  - 90% of the capacity of Orbcomm
  - able to serve all 3 service categories
- Commentors support the Leo One USA band plan
  - CTA recommends the Commission adopt the Leo One USA band plan adding that System A or B may be able to accommodate multiple small systems instead of one near real-time
  - FACS supports as a viable option adding that System A or B may be able to additionally support a small constellation

**TABLE4: HHI Analysis**

**Potential  
Licensing Outcomes**

**1 Today's environment**

	Orbcomm, Starsys & VITA each fully deploy licensed systems			VITA operates in specialized non-for-profit market			Starsys fails to launch its system			Neither VITA or Starsys participate in the market		
Licensee	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	76.51%	5854	1	80.00%	6400	1	94.61%	8951	1	100.00%	10000
Starsys	0.25	19.13%	366	0.25	20.00%	400	0	0.00%	0		0.00%	0
VITA	0.057	4.36%	19	0	0.00%	0	0.057	5.39%	29		0.00%	0
	1.31		6239	1.25		6800	1.06		8980	1.00		10000
	Market Concentration		6239	Market Concentration		6800	Market Concentration		8980	Market Concentration		10000

**2 No new licensing,  
Orbcomm 2nd  
round ammendment  
is accepted.**

Licensee	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1.16	79.07%	6253	1.16	82.27%	6768	1.16	95.32%	9085	1.16	100.00%	10000
Starsys	0.25	17.04%	290	0.25	17.73%	314	0	0.00%	0		0.00%	0
VITA	0.057	3.89%	15	0	0.00%	0	0.057	4.68%	22		0.00%	0
	1.47		6558	1.41		7083	1.22		9107	1.16		10000
	Market Concentration		6558	Market Concentration		7083	Market Concentration		9107	Market Concentration		10000

**3 Three additional licenses  
awarded as proposed  
in Systems 1, 2, & 3  
by the NPRM.**

Licensee	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	42.30%	1789	1	43.35%	1879	1	47.30%	2238	1	48.61%	2363
Starsys	0.25	10.58%	112	0.25	10.84%	117		0.00%	0		0.00%	0
VITA	0.057	2.41%	6		0.00%	0	0.057	2.70%	7		0.00%	0
System 1	0.057	2.41%	6	0.057	2.47%	6	0.057	2.70%	7	0.057	2.77%	8
System 2	0.84	35.53%	1263	0.84	36.41%	1326	0.84	39.74%	1579	0.84	40.84%	1668
System 3	0.16	6.77%	46	0.16	6.94%	48	0.16	7.57%	57	0.16	7.78%	61
	2.36		3175	2.31		3328	2.11		3831	2.06		4039
	Market Concentration		3175	Market Concentration		3328	Market Concentration		3831	Market Concentration		4039

**4 Two additional licenses  
awarded as proposed  
in System A & B  
by Leo One USA.**

Licensee	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	31.98%	1023	1	32.57%	1061	1	34.76%	1208	1	35.46%	1257
Starsys	0.25	7.99%	64	0.25	8.14%	66		0.00%	0		0.00%	0
VITA	0.057	1.82%	3		0.00%	0	0.057	1.98%	4		0.00%	0
System A	0.9	28.78%	828	0.9	29.32%	859	0.9	31.28%	979	0.9	31.91%	1019
System B	0.92	29.42%	866	0.92	29.97%	898	0.92	31.98%	1023	0.92	32.62%	1064
	3.13		2784	3.07		2885	2.88		3213	2.82		3340
	Market Concentration		2784	Market Concentration		2885	Market Concentration		3213	Market Concentration		3340

## 4. The Processing of the Pending Applications:

- Three large near real-time systems can not be accommodated in the existing bands.
- Mutual exclusivity therefore exists for the new pending NVNG MSS systems.

# Processing Procedure

- The Commission should release Report and Order by the end of February
- The Commission should adopt Domsat Financial Qualification Standard
- Concurrently, it should dismiss the pending applications of all existing licensees and applicants affiliated with existing licensees

# Processing Procedure (cont'd)

- Remaining applicants should be required to amend their applications to demonstrate compliance with Domsat financial qualification standard and new technical rules
- As proposed in the Notice, Applicants should be provided the opportunity to apply for any and all segments
- Those applicants that cannot demonstrate financial qualifications should be dismissed or deferred

## Processing Procedure (cont'd)

- If mutual exclusivity is eliminated for all band segments as a result of this process, the remaining applicants should be immediately granted licenses.
- If mutual exclusivity still exists in any band segments, the Commission should proceed to auction the spectrum.